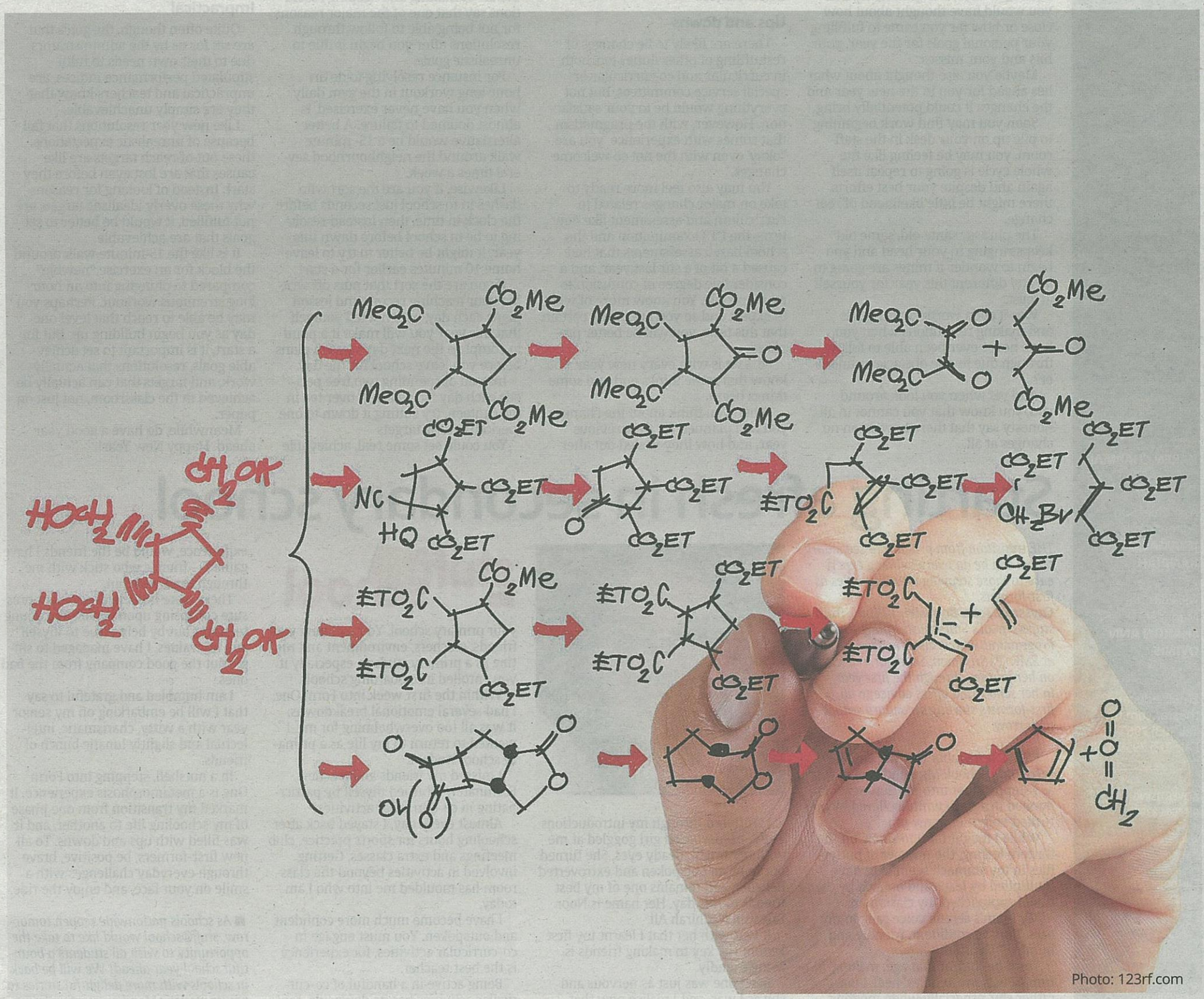
educate

Nobel dreams



It may not be long before we have world class experts and perhaps even a Nobel laureate, with current efforts to fire up interest in science among students. > 8 & 9

Striving for scientific excellence

The focus is on science education as it is those from this sector who will accelerate the nation's growth.

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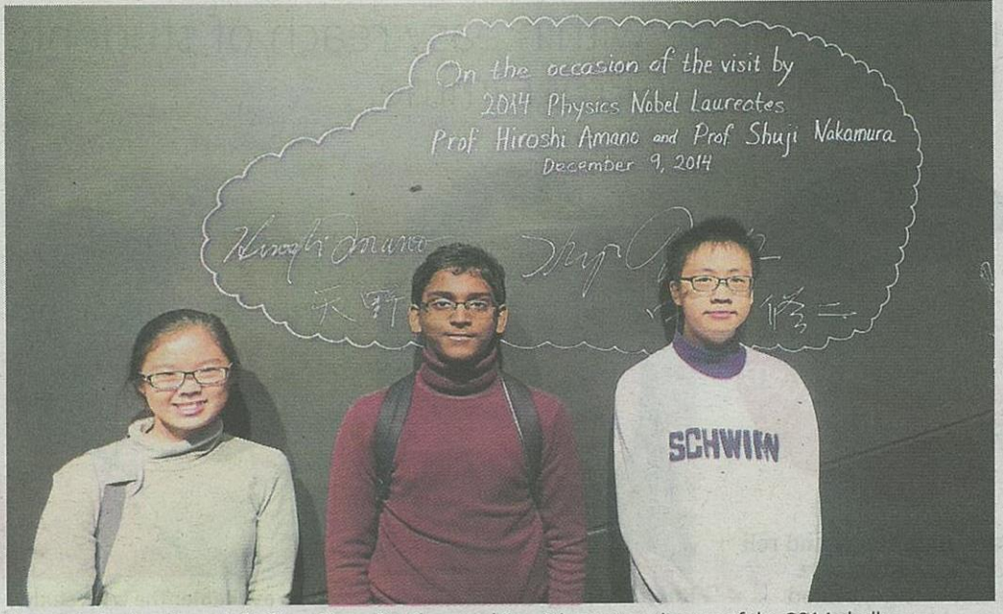

Young talents: (From left) Shan Shan, Partiban and Jing Ming were winners of the 2014 challenge. Competitions, exhibitions and projetcs are but some of the ways in giving exposure to science students keen on taking on their skills and knowledge to the next level.

SPEAKING up against the supression of girls and their right to an education has been her mantra, for which Malala Yousafzai earned the 2014 Nobel Peace Prize that she shared with Children's rights campaigner Kailash Satyarthi, from India.

"We must be able to give every child quality education ... we are living in modern times and we believe that nothing is impossible. We reached the moon 45 years ago and maybe we will soon land on Mars," said the the youngest ever Nobel Prize laureate upon receiving her award in Stockholm, Sweden.

The 17-year-old Pakistani girl who has been speaking up for children and especially girls in her country so that they can have an education, was shot in the head by Taliban gunmen some years ago.

She survived and remains a staunch advocate of education in her country.

While young people and especially girls in many countries are deprived, and in some instances prevented from having an education, children in Malaysia face no such setbacks.

In fact, children of school-going age, girls or boys, must be enrolled in school – a requirement by law.

Universiti Putra Malaysia Assoc Prof Dr Syahril Abdullah, shares the nobel laureate's sentiments saying that it is only through knowledge that one can move up. As a member of the Young Scientist Network - Academy of Sciences Malaysia (ASM), he recently led a Malaysian delegation and it included winners of last year's National Science Challenge (NSC) – See Jing Ming, Lee Shan Shan and Partiban Anathurai – to the prestigious Nobel Prize presentation ceremony in Sweden.

It was the highlight in a series of events planned during the week referred to as the "Nobel week" .

The trio from SMK King George V, Seremban, Negri Sembilan, beat 2,890 participating teams nationwide and brought home the prestigious Prime Minister's Challenge Trophy.

The trip that week also saw the winners visiting Sweden's Nobel Museum and other iconic places such as the nation's science centre.

Dr Syahril emphasised that early exposure to education, especially in the fields of science and mathematics, will allow Malaysian youth to be able to compete globally.

Dr Syahril did not dismiss the fact that with current efforts to focus on science, a Malaysian could well become a Nobel Prize recipient in the near future.

"It is important for children to have a good grasp of science concepts "for ideas to flow easily".

"While a new element or scientific discovery in itself might not change our lives, it is the knowledge and how it is applied that makes a difference," added Dr Syahril.

The focus these days is on science, as it pervades every aspect of our lives.

Reports have said that Malaysia needs science graduates to provide human capi-

New vision: Jing Ming (left) trying the virtual mobile connected visual device at the the Ericsson Studio in Sweden. Looking on are Ericsson's networked society Mats Gulbrand, Partiban and Shan Shan (right).

Keep it up! Badruddin shaking hands while handing a token of appreciation to Shan Shan at the Malaysian Embassy in Sweden. Looking on are Partiban and Jing Ming.

tal to accelerate the country's growth.

The next surge in innovation is certainly going to come from those pursuing science courses.

"Considering the technological age in which we live, science is indeed where the concentration of jobs will be in the future. The most gratifying jobs will also be in this field," shared Dr Syahril.

He added that as future policy makers and leaders of our country, young scientists with their wealth of knowledge must come up with new strategies and innovations.

In fact, Prime Minister Datuk Seri Najib Tun Razak had set the tone by saying that he would like to see Malaysia being among the top 10 countries in the global competitiveness index and global innovation index through the implementation of the Science to Action initiative.

"It is important that the nation has a specific platform to look analytically into facts and data in order to intelligently predict future trends, for the purpose of planning our next move," said Najib in his address to the science community during the ceremony of conferment of fellowship of the Academy of Sciences Malaysia (ASM).

Dr Syahril in welcoming the Prime Minister's call reiterated that it was important to invest in young science talents to ensure that Malaysia will be able to instil the culture of innovation and creativity at a young age.

Much is already being done in the way of projects, exhibitions and competitions and even visits to seminars and workshops to expose students.

"It is also important to train our young people not only to be able to work in the lab and produce quality research papers, but to communicate and think globally," Dr Syahril added.

The NSC is an annual competition organised by the academy which is endorsed by the Science, Technology and Innovation Ministry and Education Ministry.

The academy has been managing the challenge since 1999 and continues to improvise the format and module in line with the teaching and learning of science and mathematics.

The most important part of the NSC is that students learn to "synthesise" their knowledge of science and scientific principles, consolidate them in decision-making, and develop the ability for logical reasoning in their lives as well as their work in the future.

As for the Nobel recognition, it is often bestowed on scientists who contribute to the advancement of scientific knowledge and is endorsed by the Nobel Foundation.

One of the events planned for Nobel Week was a lecture by 2014 Nobel Prize for Physics recipient Prof Hiroshi Amano, from Japan.

The younger generation must tackle more difficult subjects for the improvement of mankind as well as science, he said.

Prof Amano and his mentor Prof Isamu Akasaki, from Japan's Nagoya University had succeeded in producing fine gallium nitride crystals and giving them the properties needed for efficient light emission.

Thanks to their blue light emitting diode (LED), it is now possible to produce white lamps.

Today, they are in mobile phones, bicycles, cars. Using a LED lamp for lighting instead of an incandescent light bulb or fluorescent lamp, has saved energy and also the environment.

Malaysian Ambassador to Sweden Datuk Badruddin Abdul Rahman said in line with the government's aspiration to achieve the status of developed nation by the year 2020, the idea in bringing the young talents to the ceremony was laudable.

He said that Malaysia could learn from Sweden in terms of developing creativity and innovation as Sweden has always been known for its research and development.

"The Innovation Union Scoreboard 2010, an index published by the European Commission, ranks Sweden as the leading country for innovation among European Union member states.

"Sweden has the second-fastest growth rate in the number of patents per capita. Our students can learn a lot and find out how we can achieve new discoveries especially in the field of science," added Badruddin.

evangelist

Laureate's struggle inspires teen

NOBEL Chemistry laureate Eric Betzig has always been an inspiration for 16-year-old National Science Challenge (NSC) winner Partiban Anathurai.

Despite being estranged from the academic world and the sciences for more than seven years, Betzig successfully made a comeback after building a super-powerful microscope in his friend's living room.

Betzig, shared the Chemistry award with Stefan W Hell, of the Max Planck Institute for Biophysical Chemistry in Germany, and William E. Moerner, from Stanford University in the United States, due to their achievements in the optical microscope which can now peer into the nanoworld.

The three winners were recognised and awarded for their discovery in using fluorescent molecules to give microscopes higher resolutions – turning microscopy into nanoscopy, and looking at living cells in detail.

Partiban said although Betzig had his share of failures, he never gave up and continued trying until he won the prestigious Nobel prize at the age of 54.

"Malaysian youth can learn a lot from him. No matter how low you go, you must not stop trying. We will never learn if we give up on our dreams," he said.

He said he had psyched himself for the challenge and was determined to make it to Sweden for the Nobel Prize Ceremony.

"In fact, I had put up a sign in my bedroom which read 'I am going to Sweden for the Nobel Prize Ceremony' to remind myself that it was not an impossible dream," he said.

Partiban, along with other team members had to go through the preliminary level of the 2014 NSC which was conducted online after beating 2,890 participating teams nationwide.

The team later brought home the prestigious Prime Minister's Challenge Trophy.

Team mate See Jing Ming, said that in Sweden, there seemed to be a different culture of studying science and innovation, compared to other places in the world.

"There has been so much emphasis in appreciating the art of science in museums and other monuments of interest and this has enabled Sweden to be a world leader in innovation.

"I will not be surprised if one day a Malaysian receives a Nobel Award and stands proud among other Nobel laureates," he said.

Lee Shan Shan also said that creative ideas in studying sciences were also possible in Malaysia.

"During the Nobel Week Dialogue, we managed to meet the Nobel Laureate face-to-face and learnt a lot lot from them by understanding their flow of thought, idea and how they analyse a problem or an issue.

"We also learnt that some of the problems they discussed and addressed with regard to an ageing population could be applied in Malaysia," said Shan Shan.